

# Factors Affecting the Career Choices of Medical Students and Residents

*Presented by :* Martey S. Dodoo PhD.  
Robert Graham Center,  
Washington, DC

2009 AAMC Physician Workforce Research Conference  
April 29 – May 1, 2009  
Washington, DC



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# Background

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- **Policy:** Physician training → fewer primary care compared to sub-specialists
- **Students:** Declining popularity of primary care
- **Payment** models → imbalance – PC vrs non-PC
- **Imbalance** → increased costs & underserved areas

So now more than ever, we need to understand:

1. Why students not choosing primary care or underserved practice
2. Where physician workforce can best be utilized to benefit greater society



# Previous Research

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## Effect of:

- Student factors
- Debt (mixed)
- Loan repayment programs
- Institutional factors



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# Knowledge gaps & research question

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- Major knowledge gaps in previous research:
  - Debt
  - Scholarship & Loan repayment
  - Student's relative expected income

Research Question:

- Do any of the following help predict specialty choice or practice location?
  - Level of student debt?
  - Exposure to Title VII funding?
  - Student's relative expected income?
  - Returns to investment in medical education?
  - Exposure to primary care or underserved training



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# Data sources

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- Graduation survey (GQ) (1979–2004) (AAMC)
- AMA Master file (2001 –05)
- Medicare outpatient claims -health centers (2001-05)
- NHSC participant database
- Title VII exposure data base (1979–2004)
- Primary care med. residency history data (1970-2004)
- Supplementary data



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# Methods

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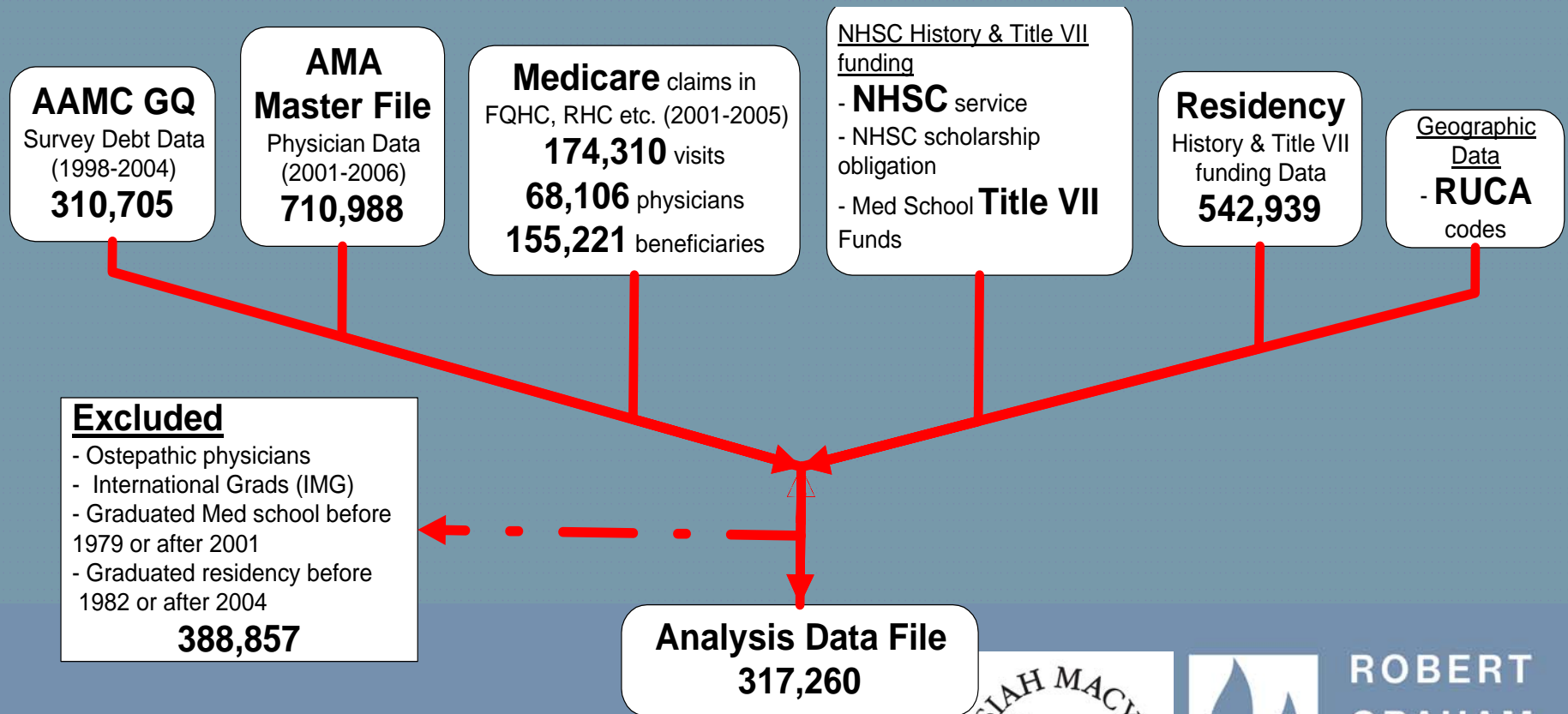
- Quality checks of all data files
- Match/merged data files → 1 analysis file
- For each set of variables:
  - SAS (v9.2) calculations
  - Logistic regressions
- Estimated average hours-adjusted NPV (ROI in medical education)



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# Data merge/match diagram



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# Basic Findings

Physician Distribution in analysis file (n=317,260)

NHSC obligation & service		Practice location	
NHSC scholarship	1.7%	Practice in MUP	3.4%
NHSC loan payment oblig.	0.7%	Practice in MUA	14.6%
Ever NHSC service	2.3%	Practice in Populn. HPSA	11.1%
<b>Career choice</b>		Practice in Geogra. HPSA	3.1%
Family Physicians	13.2%	Rural practice	9.8%
General Internists	13.3%	FQHC practice	4.7%
Gen. Pediatricians	7.6%	RHC practice	5.8%
Not primary care	65.9%		
Ever Primary care	35.3%		



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# More findings

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- Title VII exposure associated with:
  - FM & und. electives → FM & und. practice
- Inner City, Rural, Primary Care Clerkships & Electives Matter
- Rural birth →
  - 2.4 x rural practice
  - 1.8 x Family medicine practice
- Public Med School → 1.8 x FM & Rural practice
- Men half as likely to → primary care practice
- Women half as likely to → rural practice
- Married docs 50% more likely to → Family Med. practice



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# More findings

- Effect of debt:
  - With **no debt** less likely to → rural, primary care practice
  - **Up to \$150K debt** more likely → rural, PC practice
  - **Over \$150K debt** → Likelihood of practice (above) declines
- Doctors trading debt for service → up to 7 X more likely to choose primary care & underserved area practice
- FQHC or RHC practice:
  - Enhanced by obligating **scholarship**.
  - Reduced by having **debt**.
- Title VII exposure associated with increased rural practice
  - Enhanced by an obligating scholarship.

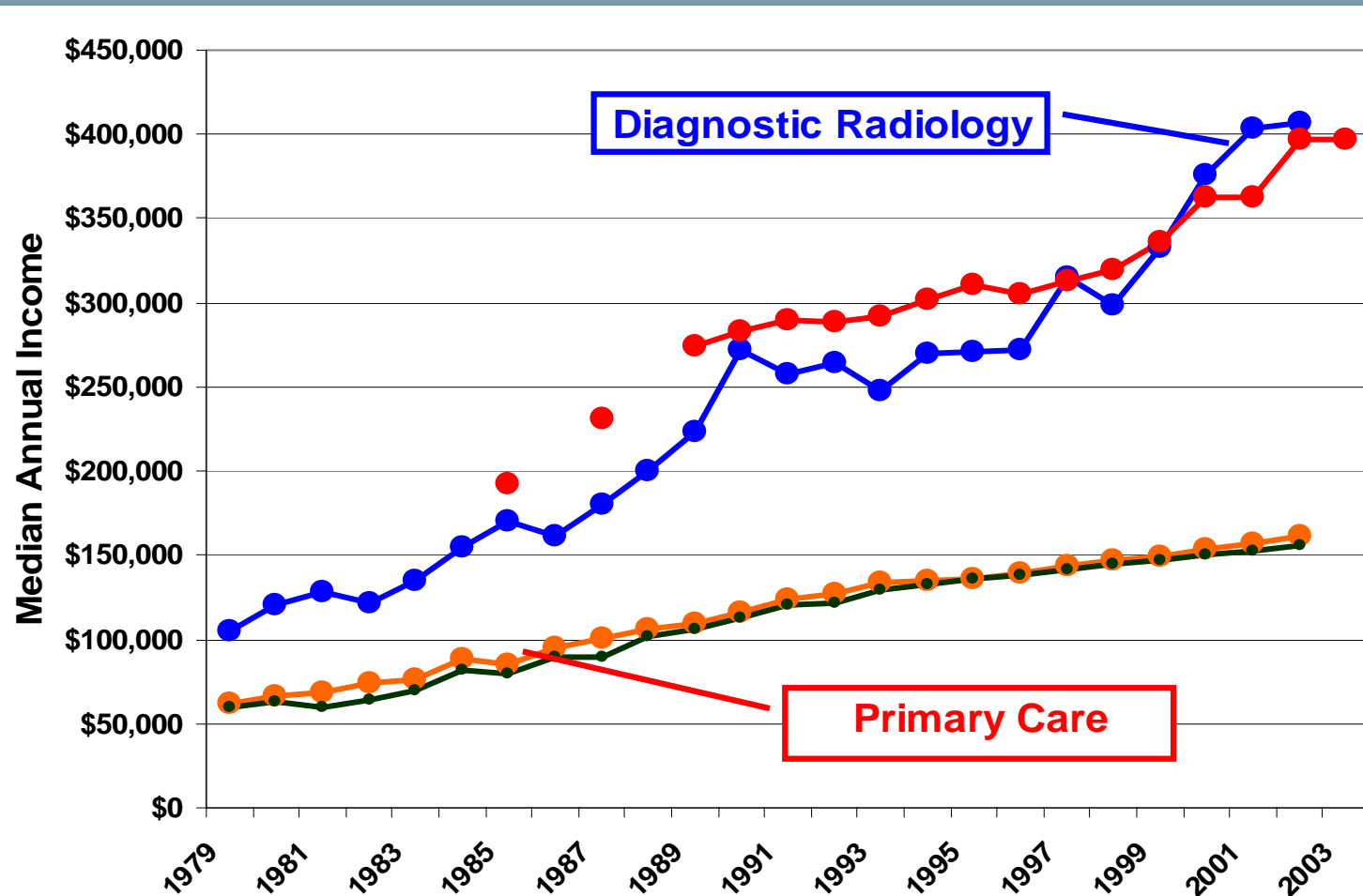


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# More Findings

Trends in payments to physician groups(1979-2003)



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# More Findings

Average hours-adjusted Net Present Value (NPV) (5%)  
and Prim. Care vrs. non-PC Difference in Lifetime earnings:

	Primary care NPV	Not prim. Care NPV	Difference in total lifetime earnings
1980-1989	\$12.54	\$36.58	\$1,751,724
1990-1999	\$23.43	\$59.95	\$2,845,379
2000-2004	\$29.58	\$78.45	\$4,093,931

Sources: Analyses from the Robert Graham Center, using data from AAMC, JAMA, Bureau of Labor Statistics, MGMA



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# Study Limitations

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- We could not obtain data on:
  - Family income,
  - Parent professional status,
  - Career interests
- We did not find data on Osteopaths
- Pediatricians bill Medicare infrequently (only disabled beneficiaries).



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# Policy Recommendations

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- To promote primary care & redistribute physician workforce to underserved areas:
  - Reauthorize and revitalize Title VII
  - Shift training → underserved area communities.
  - Increase primary care payments (cut disparity w/ non\_PC payments)
  - Admit students more likely to choose primary care or practice in underserved areas.
  - Provide more “debt for service” programs
  - Future studies on what makes underserved areas attractive practice locations, especially for women



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# Our Study Team

Robert L. Phillips, Jr., MD MSPH

Martey S. Dodoo, PhD

Stephen Petterson, PhD

Imam Xierali, PhD

Andrew Bazemore, MD MPH

Bridget Teevan, MS

Keisa Bennett, MD

Cindy Legagneur, BS

JoAnn Rudd, MA

and

Julie Phillips, MD MPH

Michigan State University College of Human Medicine



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# Acknowledgements

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This study was supported by The Josiah Macy Jr. Foundation

The authors also wish to thank:

Association of American Medical Colleges (AAMC)

Diane Rittenhouse (UCSF)

Scott Shipman (Dartmouth)

Ed Fryer (University of Arkansas)

Sarah Brotherton (AMA)

Candice Chen (GWU)

Fitzhugh Mullan (GWU)

David Goodman (Dartmouth)

Contact email:

[mdodoo@aafp.org](mailto:mdodoo@aafp.org)

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